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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/360,069	07/23/1999	PETER WOHL	SNSY-A1998-0	3639

35273 7590 10/02/2003

SYNOPSISYS, INC. C/O BEVER, HOFFMAN & HARMS, LLP
2099 GATEWAY PLACE
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SAN JOSE, CA 95110-1017

EXAMINER

GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 10/02/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/360,069

Applicant(s)

WOHL ET AL.

Examiner

Eduardo Garcia-Otero

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 September 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: no rejections have been overcome.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the ^{REQUEST FOR RECONSIDERATION,} proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-36.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☒ Other: See attachment regarding Applicant's remarks

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER

Advisory Action

Introduction

1. Title is: METHOD AND SYSTEM FOR GENERATING AN ATPG MODEL OF A MEMORY FROM BEHAVIORAL DESCRIPTIONS
2. First named inventor is: WOHL
3. Claims 1 (thrice amended), 2, 3 (amended), 4-12, 13 (currently amended), 14, 15 (currently amended), 16-24, 25 (currently amended), 26 (currently amended), 27 (currently amended), 28-35, and 36 (currently amended) are pending.
4. This action is in reply to Applicant's Request for Reconsideration, received 9/16/03.

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5. **Cheng** refers to Gate-Level Test Generation for Sequential Circuits, by Kwang-Ting Cheng, ACM Transactions on Design Automation of Electronic Systems, Vol. 1, No. 4, October 1996, Pages 405-442.
6. **Beausang'771** refers to US Patent 5,696,771.
7. **MS Dictionary** refers to Microsoft Computer Dictionary, Fourth Edition, by Microsoft Press, JoAnne Woodcock as Senior Contributor, ISBN 0-7356-0615-3, May 1999.

Remarks

8. Applicant has submitted a detailed discussion of the distinction between ROM and non-ROM memories with respect to the claimed invention. Per telephone discussion (see attached interview summary) between Examiner and Applicant's Attorney Jeannette Harms on 10 September 2003, and per paragraphs 48-49 of the prior office action, it appeared possible that said distinction might be allowable if the Applicant could overcome MPEP 2144.04(II)(A) regarding eliminating features and their functions.
9. **DISTINCTION IN SPECIFICATION.** The Applicant has cited the specification discussing the distinction between ROM and non-ROM. First, specification page 14 line 23 to page 15 line 10 states "... Only complicated memories, such as RAMs and CAMs, may need be simplified before the ATPG memory model generation process... behavioral descriptions of ROMs contained in simulation library 301 are used directly by ATPG memory generation process 310, whereas the simplified behavioral descriptions 340 of the RAM and CAMs".

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10. Second, specification page 16 lines 13-17, states “ROMs generally do not need to be re-described because the behavioral descriptions for ROMs are generally not complex...”.
11. Third, specification page 17 lines 15-22, states “Simulation models of RAMs are very complex, often having thousands of lines of behavioral Verilog that are organized based on the timing and layout of the RAM. In most cases, it is very difficult to extract a unit-delay or zero-delay functional model from the behavioral description of a RAM. Accordingly, in the present invention, behavioral descriptions of complicated memories are simplified by re-describing the memories with a predefined subset of behavioral Verilog. The simplified behavioral description (or behavioral models) can then be automatically converted into ATPG memory models by process 310 in accordance with the present invention”.
12. Fourth, specification page 31 line 23 to page 32 line 5 discusses CAMs (Content-Addressable Memories).
13. Thus, Applicant has given strong reasons, supported by the specification, why ROMs should be treated differently than non-ROMs.
14. **However, Applicant has not provided persuasive assertions that this different treatment would not be obvious to one of ordinary skill in the art.**
15. MPEP 2144.04(II)(A), AND LEGAL PRECEDENT. Note that MPEP 2144.04(II)(A) “Omission of an Element and Its Function Is Obvious If the Function of the Element Is Not Desired” cites *In re Larson*, 340 F.2d 965, 144 USPQ 347, 350 (CCPA 1965) which states **“If this additional features is not desired, it would seem a matter of obvious choice to eliminate it and the function it serves”**.
16. Specifically, MPEP 2144.04(II)(A) states:

Ex parte Wu , 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) (Claims at issue were directed to a method for inhibiting corrosion on metal surfaces using a composition consisting of epoxy resin, petroleum sulfonate, and hydrocarbon diluent. The claims were rejected over a primary reference which disclosed an anticorrosion composition of epoxy resin, hydrocarbon diluent, and polybasic acid salts wherein said salts were taught to be beneficial when employed in a freshwater environment, in view of secondary references which clearly suggested the addition of petroleum sulfonate to corrosion inhibiting compositions. The Board affirmed the rejection, holding that it would have been obvious to omit the polybasic acid salts of the primary reference where the function attributed to such salt is not desired or required, such as in compositions for providing corrosion resistance in environments which do not encounter fresh water.). See also *In re Larson*,

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340 F.2d 965, 144 USPQ 347 (CCPA 1965) (Omission of additional framework and axle which served to increase the cargo carrying capacity of prior art mobile fluid carrying unit would have been obvious if this feature was not desired.); and In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (deleting a prior art switch member and thereby eliminating

17. For example, in Applicant's claim 1 (thrice amended), the non-ROM is simplified by using a "predefined proper subset of said behavioral hardware description language". Said "predefined proper subset" may exclude timing information (per claim 2). Note that Cheng explicitly discloses ignoring timing information ("ignoring the circuit delays" at Cheng page 407).
18. Further, note that MPEP 2144.04(II)(B) states "the omission of an element and retention of its function is an indicia of nonobviousness". However, the claimed invention appears to omit elements and not retain the associated function, so there is no indicia of nonobviousness.
19. In conclusion, the pending 35 USC 103 rejections are retained, without any changes.

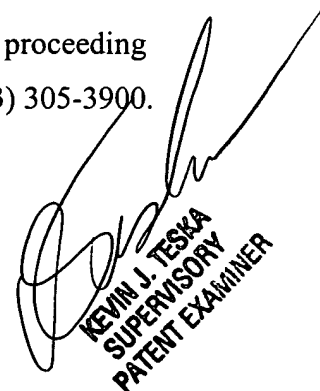
Conclusions

20. All pending claims are rejected against prior art under 35 USC 103.

Communication

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 7:00 PM.
22. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone numbers for this group are:
23. (703) 746-7238 --- for communications after a Final Rejection has been made;
24. (703) 746-7239 --- for other official communications; and
25. (703) 746-7240 --- for non-official or draft communications.
26. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

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KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER